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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/010,269 | 12/06/2001 | James Richard Lines | 86038.000090 | 5578 |
| 23387 | 7590 | 12/24/2003 | EXAMINER | |
| Stephen B. Salai, Esq. Harter, Secrest & Emery LLP 1600 Bausch & Lomb Place Rochester, NY 14604-2711 | | | MCKINNON, TERRELL L | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 3743 | |

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DATE MAILED: 12/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/010,269

Applicant(s)

LINES ET AL.

Examiner

Terrell L Mckinnon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/07/20.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,7-10 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 3-6,11 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Response to Amendment

Receipt is acknowledged of applicant's amendment filed November 7, 2003.

Claims 1-15 are pending and an action on the merits is as follows.

Applicant's arguments with respect to claims 1, 7, 8, 12 and 13 have been considered but are moot in view of the new ground of rejection.

The indicated allowability of claims 2, 9, 10 and 14 is withdrawn in view of the newly discovered reference to Fahlsing (U.S. 6,588,499). The rejection below is based on the newly cited reference.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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2. Claims 1, 7, 8, 12 and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Fahlsing (U.S. 6,588,499).

Fahlsing discloses a heat exchanger and method comprising:

- a heat exchanger including a heat transfer wall having a first surface (15) and an opposite second surface;
- passing a cooled fluid in contact with the first surface of the heat transfer wall and passing a cooling fluid in contact with the second surface of the heat transfer wall;
- directly monitoring (99) the temperature of the first surface of the heat transfer wall (column 10, lines 50-65);
- adjusting the flow (50) of one of the cooled fluid and cooling fluid in response to the temperature of the first surface (column 6, lines 42-60); wherein
- adjusting the flow of one of the cooled fluid and cooling fluid is accomplished in response to the temperature of the first surface decreasing at a rate exceeding a predetermined value;
- monitoring is accomplished by a thermocouple (99) fixed directly to the first surface (15);
- a housing (structure in Fig. 2) containing flow paths for a cooled fluid and a cooling fluid, the housing having a heat transfer wall with a first surface for contacting the cooled fluid and a second surface for contacting the cooling fluid.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 9, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fahlsing (U.S. 6,588,499).

Fahlsing's invention discloses all of the claimed limitations from above except for adjusting the flow comprises reducing the flow of the cooling fluid in response to the temperature of the first surface falling to a level at least 50 degrees below the freezing temperature of the cooled fluid; and restoring the first flow rate upon the temperature of the outer surface increasing to within 50 degrees of the freezing temperature of the cooled fluid.

5. However, Fahlsing teaches the use of engaging the freeze protection system at varying freezing temperatures (column 9, lines 55-65).

Given the teachings of Fahlsing, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the freeze protection system of Fahlsing by reducing the flow of the cooling fluid in response to the temperature of the first surface falling to a level at least 50 degrees below the freezing temperature of the cooled fluid; and restoring the first flow rate upon the temperature of the outer surface increasing to within 50 degrees of the freezing temperature of the cooled fluid.

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Doing so would provide would provide a wide range of freezing temperatures wherein the system is protected from freezing.


Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references are cited for disclosing related limitations of the applicant's claimed and disclosed invention. Katashiba et al., Evens, Hayes et al, Lomax et al., Moslehi et al and Pomerene et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell L Mckinnon whose telephone number is 703-305-0059. The examiner can normally be reached on Monday -Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennett can be reached on 308-0101. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.


Terrell L Mckinnon
Primary Examiner
Art Unit 3743
December 16, 2003